

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 25-28 are pending in the application subsequent to entry of this Amendment. Claim 29 has been withdrawn to reduce issues thereby overcoming the rejections stated in items 7 and 10 of the Official Action.

This leaves for consideration only the rejection stated in item 9 of the Official Action as being anticipated by or obviousness over the Waggoner et al 1981 Biophysical Journal.

The amendments made above to claims 25 and 26, the two independent claims remaining in the application, impart novelty to these claims and serve to further characterize the dyes used in the claimed luminescent photostable reaction products and luminescently labeled components as water-soluble dyes containing at least one sulfonate or sulfonic acid group. These features, taken with the other requirements of these claims, namely that the dye contains at least one substituent to make the dye covalently reactive with the component in question and that the individual dye molecules have the required extinction coefficient, quantum yield, absorption properties and water solubility, further characterize the invention.

The inventor of the subject application is the senior author of the Waggoner et al article cited in item 9 of the Official Action. The dyes employed in the present invention are distinguished from those described in the Waggoner et al article by virtue of the characteristics mentioned above, hence there is no anticipation.

Further, the claims would not have been obvious when one considers the requirements and properties of the dyes and the span between 1981 publication date of the Waggoner et al article and the 1986 filing date from which benefit is claimed in the present application. It took the present inventor approximately five years to arrive at the present invention and to focus on cyanine dyes having the requisite properties including increased water solubility, stability and reduced dye-to-dye interaction. This time span must be regarded as an indication of the inventiveness of the claims now under review. Indeed, if it took the inventor, a person highly skilled in this subject matter, five years to arrive at the use of the dyes described in claims 25 and 26, surely it would have taken one skilled in the art at least as long if not longer to identify suitable (or even candidate) luminescent dyes to prepare luminescent photostable reaction products and luminescently labeled components having all of the characteristics specified in claims 25 and 26.

WAGGONER
Appl. No. 09/740,486
March 10, 2005

The examiner will also appreciate at the time that this work was performed in 1981 and thereafter and up to the filing date of the subject application, there were no reports, hints or suggestions from the scientific literature that the problem of quenching of dye fluorescence could be solved by aryl sulfonation. Thus, the skilled person is not taught or even motivated to try this approach to solving the abovementioned problem.

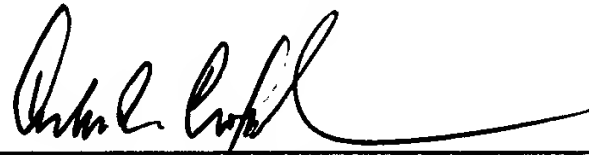
Attention is invited to the concurrently filed evidentiary declaration made by Professor Waggoner on March 9, 2005. This further evidence is submitted under the provisions of 37 C.F.R. §1.132 in support of the above statements relating to the development of the present invention.

Reconsideration and favorable action are solicited.

Respectfully submitted,

NIXON & VANDERHYTE P.C.

By:



Arthur R. Crawford
Reg. No. 25,327

ARC:eaw
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100